

Therefore, it was necessary to supplement this list by contacting all known or possible multi-establishment companies. In order to obtain a list of their individual establishments, in January of 1963, a pre-census form, NCX-1A, Listing Establishments, was sent to all companies that had indicated in the 1958 Census of Mineral Industries that they had more than one mineral establishment. In addition, all "apparent" single-establishment companies in the IRS-SSA file of EI numbers with sizable employment were included in this pre-census.

For the known multi-establishment companies, the Census Bureau pre-listed the establishments as they had been last reported to the Census Bureau. The company was requested to update this list by deleting abandoned operations, correcting addresses, reporting the current EI numbers used for each establishment, and adding any establishments operated but not already included in the listing. The EI numbers reported for these multi-establishment companies were excluded from the list of EI numbers obtained from IRS-SSA prior to mailing the 1963 Census Report Forms. Thus, the 1963 Census of Mineral Industries list for single-establishment companies was obtained from the IRS-SSA, but the list of establishments of multi-unit companies was obtained directly from those companies by a special pre-census survey.

While the IRS-SSA list was generally adequate in providing sufficient industry and size information to determine the proper form for mailing, a number of the EI numbers did not have precise industry or size information associated with them. A special form, NCX-3, "General Report," was mailed to all such companies in the 1963 censuses of business, manufactures, and minerals in-

dustries. Since it was assumed that these establishments were quite small, only limited statistics were required. On the basis of the information reported, these establishments were coded and included in the basic tabulations. If the NCX-3 indicated substantial activity, the company was recontacted with a standard census form.

mailing and receiving, including the various reminder mailings. routine editing, coding, and card punching, was done at the Census Bureau's Operations Office in Jeffersonville, Ind. The difficult problem reports and all reports from very large companies were sent to Washington for review prior to punching. The punched data were transmitted to Washington through a telephone computer linkup and all computer processing, review of the tabulated data, and the preparation of the publications were performed in Washington.

Throughout the survey, there was a concerted effort to assure completeness of coverage through systematic reminders at 4- to 6-week intervals (including the use of certified mail, telegrams, and for the larger companies, telephone calls).

Particular attention was devoted to assuring completeness and correctness of the reporting by large companies. In the early stages of processing, the individual establishment reports of the very

The supplementation of the census basic list for "no employees" establishments with Bureau of Mines lists was discussed in section 9. In addition, the lists for the crude petroleum and natural gas industry were supplemented by a preenumeration of oil and gas field service companies in order to obtain the names and addresses of companies served. About 4,000 names were added to the list of operators of oil and gas field properties on the basis of this survey.

11. COLLECTION AND PROCESSING OF REPORTS

The 1963 census report forms were distributed and returned by mail. The very large multi-establishment companies were mailed their

large companies were reviewed along with the company summary report. Form NC-K1, to assure that the company had included reports for all its establishments and subsidiaries and that there was no duplication in reporting among manufacturing, minerals, central offices, and sales branches and offices. The NC-K1 was also a vehicle for the company to report changes in ownership since the Census preenumeration was conducted in the preceding year. Accurate company affiliation information is necessary; it should be noted, to enable the Census Bureau to review the tabulations to assure confidentiality of the data and to provide statistics for the Enterprise Statistics program. Part 2 of Form NC-K1 required that the parent company reconcile its payroll figures by EIN numbers filed with the Internal Revenue Service to those reported on the individual censuses of manufactures, business, and mineral industries reports. As a result of this comparison, omissions were detected, as was duplication in reporting within the Census establishment file.

forms in November 1963, in order to give them as much time as possible to meet the substantial demands of the 1963 census on their statistical staffs. Report forms for the smaller companies were mailed in January 1964. Collection of all report forms was completed by August 1964. All

All report forms were edited by the computer. The operating ratios for each establishment were developed and compared with industry averages developed from the 1958 Census of Mineral Industries. Large establishments with identifiable problems were listed for subsequent review by the Bureau's statisticians. Smaller establishments with problems were tentatively accepted or modified by the computer, but they were annotated for subsequent examination. In the review of the tabulations prior to the publication of the final reports,

the selected operating ratios for all establishments were analyzed and the mean ratio for all establishments in each industry determined. A frequency distribution of establishments according to operating ratio class was prepared, and those establishments whose ratios were more than two standard deviations from the industry average were isolated as "outliers," examined and, if necessary, corrected. A similar type of analysis was made for the individual products shipped and the individual supplies consumed.